

## CLAIMS

What is claimed is:

1. A system for connecting a call having call signaling and user communications, the system comprising:

a signaling processor adapted to receive and to process the call signaling to select an ATM connection for the user communications and to transmit a control message identifying the selected ATM connection; and

an asynchronous transfer mode matrix adapted to receive the user communications over another ATM connection, to receive the control message from the signaling processor, and, in response to the control message, to connect the user communications over the selected ATM connection.

2. The system of claim 1 wherein the system is used for survivability for alternate routing.

3. The system of claim 1 wherein the system is used for call control for alternate routing.

4. The system of claim 1 further comprising an asynchronous transfer mode switching system adapted to transport the user communications to the asynchronous transfer mode matrix.

5. The system of claim 4 wherein the asynchronous transfer mode switching system comprises a controllable asynchronous transfer mode matrix.

6. The system of claim 4 wherein the asynchronous transfer mode switching system comprises an asynchronous transfer mode cross connect.

7. The system of claim 4 wherein the asynchronous transfer mode switching system comprises an asynchronous transfer mode gateway.

8. The system of claim 1 further comprising an asynchronous transfer mode switching system adapted to receive the user communications from the asynchronous transfer mode matrix.

9. The system of claim 8 wherein the asynchronous transfer mode switching system comprises a controllable asynchronous transfer mode matrix.

10. The system of claim 8 wherein the asynchronous transfer mode switching system comprises an asynchronous transfer mode cross connect.

11. The system of claim 8 wherein the asynchronous transfer mode switching system comprises an asynchronous transfer mode gateway.

12. A system for connecting a call having call signaling and user communications, the system comprising:

a first switching system adapted to transport the user communications over a first connection;

5 a signaling processor adapted to receive and to process the call signaling to select a second connection for the user communications and to transmit a control message identifying the selected second connection;

10 an asynchronous transfer mode matrix adapted to receive the user communications that were transported over the first connection, to receive the control message from the signaling processor, and, in response to the control message, to connect the user communications over the selected second connection; and

15 a second switching system adapted to receive the user communications that were transported over the second connection.

13. The system of claim 12 wherein the system is used for survivability for alternate routing.

14. The system of claim 12 wherein the system is used for call control for alternate routing.

15. The system of claim 12 wherein the first switching system comprises a controllable asynchronous transfer mode matrix and wherein at least one of the first

connection and the selected second connection is an asynchronous transfer mode connection.

16. The system of claim 12 wherein the first switching system comprises an asynchronous transfer mode cross connect and wherein the first connection and the selected second connection are asynchronous transfer mode connections.

17. The system of claim 12 wherein the first switching system comprises an asynchronous transfer mode gateway and wherein the first connection and the selected second connection are asynchronous transfer mode connections.

18. The system of claim 12 wherein the first switching system comprises a time division multiplex switch.

19. The system of claim 12 wherein the first switching system comprises a local exchange carrier switch.

20. The system of claim 12 wherein the first switching system comprises an interexchange carrier switch.

21. The system of claim 12 wherein the second switching system comprises a controllable asynchronous transfer mode matrix.

22. The system of claim 12 wherein the second switching system comprises an asynchronous transfer mode cross connect.

23. The system of claim 12 wherein the second switching system comprises an asynchronous transfer mode gateway.

24. The system of claim 12 wherein the second switching system comprises a time division multiplex switch.

25. The system of claim 12 wherein the second switching system comprises a local exchange carrier switch.

26. The system of claim 12 wherein the second switching system comprises an interexchange carrier switch.

27. The system of claim 12 wherein the selected second connection comprises an asynchronous transfer mode connection.

28. The system of claim 12 wherein the first connection comprises an asynchronous transfer mode connection.

29. The system of claim 12 wherein the selected second connection comprises a time division multiplex connection.

30. The system of claim 12 wherein the first connection comprises a time division multiplex connection.

31. A system for connecting a call having call signaling and user communications, the system comprising:

a signaling processor adapted to receive and to process the call signaling to select a first, second, and third connection for the user communications and to transmit a first, second, and third control message identifying the selected first, second, and third connections, respectively;

BI a first interworking unit adapted to receive the user communications, to receive the first control message, and, in response to the first control message, to interwork the user communications over the first connection;

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an asynchronous transfer mode matrix adapted to receive the user communications that were transported over the first connection, to receive the second control message, and, in response to the second control message, to connect the user communications over the selected second connection; and

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a second interworking unit adapted to receive the user communications that were connected over the second connection, to receive the third control message, and, in response to the third control message, to interwork the user communications over the third connection.

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32. The system of claim 31 wherein the system is used for survivability for alternate routing.

33. ~~The system of claim 31 wherein the system is used for call control for alternate routing.~~

34. The system of claim 31 further comprising a switching system adapted to transport the user communications to the first interworking unit.

35. The system of claim 34 wherein the switching system comprises a time division multiplex switch.

36. The system of claim 34 wherein the switching system comprises a local exchange carrier switch.

37. The system of claim 31 further comprising a switching system adapted to receive the user communications from the second interworking unit.

38. The system of claim 37 wherein the switching system comprises a time division multiplex switch.

39. The system of claim 37 wherein the switching system comprises a local exchange carrier switch.

40. The system of claim 31 further comprising a switching system adapted to transport the user communications to the asynchronous transfer mode matrix.

41. The system of claim 40 wherein the switching system comprises a controllable asynchronous transfer mode matrix.

42. The system of claim 40 wherein the switching system comprises an asynchronous transfer mode cross connect.

43. The system of claim 40 wherein the switching system comprises an asynchronous transfer mode gateway.

44. The system of claim 31 further comprising a switching system adapted to receive the user communications from the asynchronous transfer mode matrix.

45. The system of claim 44 wherein the switching system comprises a controllable asynchronous transfer mode matrix.

46. The system of claim 44 wherein the switching system comprises an asynchronous transfer mode cross connect.

47. The system of claim 44 wherein the switching system comprises an asynchronous transfer mode gateway.



48. A method for connecting a call having call signaling and user communications, the method comprising:

receiving and processing the call signaling to select an ATM connection for the user communications;

transmitting a control message identifying the selected ATM connection;

receiving the user communications over another ATM connection and

receiving the control message, both at an asynchronous transfer mode matrix; and

connecting the user communications over the selected ATM connection in

response to the control message using the asynchronous transfer mode matrix.

49. The method of claim 48 further comprising transmitting the call signaling though the asynchronous transfer mode matrix.

50. The method of claim 48 further comprising selecting the selected ATM connection based on a call control method.

51. The method of claim 48 further comprising selecting the selected ATM connection based on alternate call routing for survivability.

52. The method of claim 48 further comprising transporting the user communications on the another ATM connection.

53. The method of claim 52 further comprising interworking the user communications from a time division multiplex format to an asynchronous transfer mode format prior to transporting the user communications on the another ATM connection.

54. The method of claim 48 further comprising receiving the user communications on the selected ATM connection.

55. The method of claim 54 further comprising interworking the user communications to a time division multiplex format from an asynchronous transfer mode format after to receiving the user communications over the selected ATM connection.